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AIR COMPONENT COMMANDER -- IS THE CONCEPT VIABLE?

A Monograph

by

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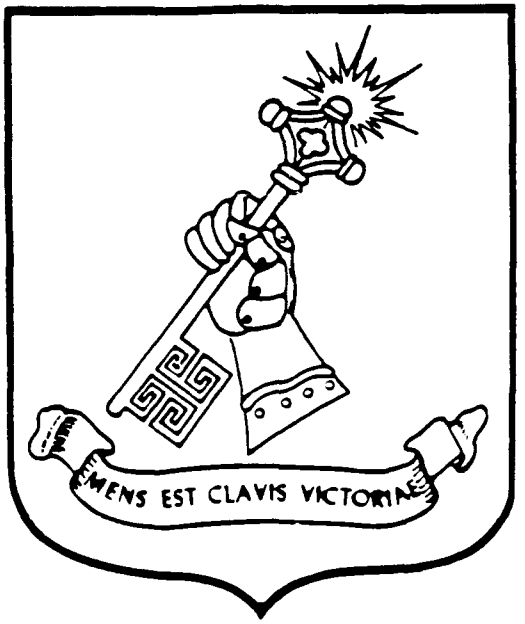

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The monograph examines the position held by the Air Force that a single manager of all aviation assets -- an Air Component Commander -- is required for the effective and efficent employment of joint aviation. This concept of an Air Component Commander (Air Force term) differs in some substantial ways from the concept of Joint Force Air Component Commander (JFACC) as defined by the Joint Chiefs of Staff. The relationship, and differences, between these two concepts will be developed by using doctrinal definitions. The aviation doctrine and stucture of each service will be examined to illustrate the capability each service possesses to accomplish their stated doctrinal aviation mission. Using this doctrinal and structural development for each service as a basic framework, the concept of the Air Component Commander will be overlayed on the framework to determine whether it seems viable for a single manager to perform all, or most, of the aviation tasks required by the individual services. The viability of the Air Component Commander concept will then be assessed (continued on other side of form)

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against the criteria of identified aviation missions, roles, and tasks identified in each service's doctrine.

The conclusion reached is that the Air Component Commander concept does not seem viable in an era when each of the four services have developed a unique aviation doctrine and structure. The single manager of all air resources, and the "indivisibility of air" concept of the Air Force, do not appear particularly viable against a Soviet opponent with a radically different view of aviation and its employment. The Joint Force Air Component Commander, as defined by JCS, is not the same as the Air Component Commander Concept of the Air Force, and appears to be a much more viable concept for the coordination and control of aviation in the joint force. And finally, there is a critical shortfall in a common joint vision on what aviation is to do, and a joint aviation doctrine which would support that vision. This joint vision and doctrine for aviation must be developed.

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ABSTRACT

AIR COMPONENT COMMANDER -- IS THE CONCEPT VIABLE?, Major Joseph Noble, U.S. Marine Corps. 51 pages.

The monograph examines the position held by the Air Force that a single manager of all aviation assets -- an Air Component Commander -- is required for the effective and efficient employment of joint aviation. This concept of an Air Component Commander (Air Force term) differs in some substantial ways from the concept of Joint Force Air Component Commander (JFACC) as defined by the Joint Chiefs of Staff. The relationship, and differences, between these two concepts will be developed by using doctrinal definitions. The aviation doctrine and structure in each service will be examined to illustrate the capability each service possesses to accomplish its stated doctrinal aviation mission. Using this doctrinal and structural development for each service as a basic framework, the concept of the Air Component Commander will be overlayed on the framework to determine whether it seems viable for a single manager to perform all, or most, of the aviation tasks required by the individual services. The viability of the Air Component Commander concept will then be assessed against the criteria of identified aviation missions, roles and tasks identified in each service doctrine.

The conclusion reached is that it does not seem that the Air Force Air Component Commander concept is viable in an era when each of the four services has developed a unique aviation doctrine and structure. The single manager of all air resources and the "indivisibility of air" concept of the Air Force do not appear particularly viable against a Soviet opponent with a radically different view of aviation and its employment. The Joint Force Air Component Commander, as defined by the JCS, is not the same as the Air Force Air Component Commander concept, and appears to be a much more viable concept for the coordination and control of aviation in a joint force. And finally, there is a critical shortfall in a common joint vision on what aviation is to do, and a joint aviation doctrine which would support that vision. This joint vision and doctrine for aviation must be developed.

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Air Component Commander -- Is the Concept Viable?

I. INTRODUCTION

All four of the services -- Army, Air Force, Navy, and Marine Corps -- agree that exploiting the dimension of air on the next battlefield will be crucial for success. The doctrine of each Service reflects this, as do their equipment acquisitions of aviation systems and their training programs. Each service has developed and refined an aviation capability it feels is essential to its performance as a viable force.

In a joint environment -- as everyone seems to concede that the next use of military force will be joint -- these varying aviation organizations from each service will be operating in a common medium -- the skies -- against a common adversary to accomplish the objectives of the joint force. A crucial issue to be decided by the Joint Force Commander (JFC) is how he will organize his joint force -- and its aviation resources -- to best accomplish his mission. The command relationships established may well be the most important decision the JFC will make. Joint doctrine identifies a number of methods of exercising operational command to the JFC : through service component commanders, through functional component commanders, through a commander of a joint task force, by attaching elements of one force to another force, or to specific oper-

ating forces reporting directly to him.1

It is into the dynamics involved in deciding between a command relationship between service component commanders and functional component commanders that this monograph will be dedicated, especially as the decision relates to aviation. The critical issue to be examined concerns the position held by the Air Force that a single manager of all aviation assets -- an Air Component Commander -- is required for the effective and efficient employment of joint aviation.2 This concept of an Air Component Commander (Air Force term) differs in some substantial ways from the concept of Joint Force Air Component Commander (JFACC) as defined by the Joint Chiefs of Staff.3 The relationship, and differences, between these two concepts will be developed later in the monograph. For purposes of initial development, the Air Force's concept of a single manager of all aviation assets responsible for both the planning and execution of the air battle will be the one examined.

The Air Force holds that air power is an indivisible resource which requires a single manager. Is this concept viable in today's joint environment? Does it seem practical to expect a representative from a single service to understand the doctrine, structure, and capabilities of the aviation resources of all four services so he can effectively plan for their use and control their employment? If not, what possible alternative concepts would accomplish the

critical task of effectively employing aviation assets in a joint operation?

The concept of Air Component Commander will be examined by using doctrinal definitions and conceptual discussions from several sources. Aviation doctrine from each of the four services will be reviewed to establish how each service envisions aviation employment on the modern battlefield. The aviation structure in each service will be examined to illustrate the capability each service possesses to accomplish its stated doctrinal aviation mission. Using this doctrinal and structural development for each service as a basic framework, the concept of the Air Component Commander will be overlayed on the framework to determine whether it seems viable for a single manager to perform all, or most, of the aviation tasks required by the individual services. The JCS Joint Force Air Component Commander concept will be presented and compared to the Air Force Air Component Commander concept. The viability of the Air Component Commander concept will then be assessed against the criteria of identified aviation missions, roles and tasks identified in each service doctrine. If the concept appears viable, the conclusion will so state. If it is not, alternatives will be recommended, including implications concerning the JFACC concept.

Prior to exploring each service's doctrine, however, a basic premise of this monograph must be explained. It has become customary to disregard rotary-wing (helicopter)

aviation in any discussions of joint aviation command relationships. The custom has been to only discuss fixed-wing (tactical aviation or TACAIR) aviation of the Air Force, Navy, and the Marine Corps. Helicopters have been exempted, with tasking authority and control retained by each service. No doctrinal premise for this tradition exists, only a written agreement between the Air Force and the Army in 1966.4 In an age of sophisticated technology where aviation capabilities such as tilt-rotor aircraft (MV-22 Osprey), vertical short take-off and landing (VSTOL) aircraft (AV-8 Harrier), and helicopters designed to shoot down other helicopters and TAC-AIR (Soviet Hokum) are being developed and fielded, the issue of separating one type of aviation asset from another in command relationships will become more and more impractical. Therefore, for the purpose of this monograph, all aviation assets from the four services will be considered in the question of command relationships, rotary-wing as well as fixed-wing. Although this is not the accepted custom today, it can be speculated that it may well be a common occurrence in the near future.

II. DEVELOPMENT OF AVIATION DOCTRINE AND STRUCTURE

To establish a framework for evaluating the Air Component Commander concept, the doctrine and structure relating to aviation for each of the four services must be developed. The services' doctrines will each be looked at in turn, starting with the Air Force, followed by the Navy, then the Marine Corps, and, finally, the Army.

The Air Force mission is to ". . . be organized, trained, and equipped to perform prompt and sustained offensive and defensive air operations.", as stated in the National Security Act of 1947. The Air Force has taken this mission and further broken it down into what it refers to as "interdependent missions" which "produce specific effects and influences in deterring war, defending the United States and its Allies, and conducting warfare."5 These interdependent missions are : Strategic Aerospace Offense, Strategic Aerospace Defense, Counter Air, Air Interdiction, Close Air Support, Special Operations, Airlift, Aerospace Surveillance and Reconnaissance, and Aerospace Maritime Operations. In addition to these "missions", the Air Force also identifies "specialized tasks" it must perform.6 These tasks are : Aerial Refuelling; Electronic Combat; Warning, Command, Control, and Communications; Intelligence; Aerospace Rescue and Recovery; Psychological Operations; and Weather Service. In summary, the Air Force identifies nine "interdependent

missions" and seven "specialized tasks" in its doctrine which capture the Air Force view of what functions aviation must perform. What type of structure, specifically what types of capabilities in assets, has the Air Force procured to accomplish these missions and tasks?

Table 1 in Appendix A lists the types of aircraft fielded in the Air Force today and indicates which mission or task each aircraft is expected to perform .7 Without getting into details which exceed the parameters of this monograph, other assets are identified generically (C3 system, weather systems, etc.) to indicate whether the Air Force possesses the capability for each specified mission and task. A table such as this will be presented for the aviation assets of each of the other services for further comparison.

Now we will examine the Navy's doctrine for aviation. Unlike the other services, the Navy does not have a separate doctrinal publication which specifically addresses aviation. Aviation is viewed by the Navy as an integral component of naval power which, with surface and subsurface vessels, contributes to the holistic projection of naval power.8 According to Navy doctrine, "Because U.S. naval forces routinely deploy to areas well beyond the range of U.S. land-based air cover where they may be exposed to attack by potential adversary land-based air, and because the manned aircraft is presently the most capable and sophisticated weapon system available to counter enemy manned aircraft and establish and

maintain local air superiority in areas of U.S. naval operations, it is essential that U.S. naval battle forces and groups include organic tactical air power at certain times and places."9 Thus, the primary mission of naval aviation can be deduced to be establishing and maintaining local air superiority in areas of U.S. naval operations.

What tasks must naval aviation perform to accomplish this mission? Again, Navy doctrine does not separately set out aviation-only tasks, but rather establishes six fundamental tasks and six supporting tasks which naval forces must perform. Each of these twelve warfare tasks is listed with the type of platform (carrier air, surface combatant, submarine, amphibious, maritime patrol air, or support) which supports that task. From this list, the tasks of naval aviation (carrier air, maritime patrol air, and support) can be derived. The fundamental warfare tasks supported by naval aviation and the type of aviation which supports each are :

Antiair Warfare - Air Superiority and Air Defense (carrier air)

Antisubmarine Warfare - Distant and Close Operations (carrier air, maritime patrol air)

Antisurface Warfare - Distant and Close Operations (carrier air and maritime patrol air),

Strike Warfare - Nuclear and Conventional (carrier air)

Amphibious Warfare - Close Support only (carrier air)

Mine Warfare - Offensive only (carrier air, maritime patrol air).

The supporting warfare tasks and the type of aviation which supports each are as follows:

Special Warfare - (none)

Ocean Surveillance - (carrier air, maritime patrol air, support air)

Intelligence - (carrier air, maritime patrol air)

C3 - (carrier air, maritime patrol air, support air)

Electronic Warfare - (carrier air, maritime patrol air, support air)

Logistics - (carrier air, support air).10

Thus, naval aviation can be said to have six fundamental warfare tasks and five supporting warfare tasks. How these tasks compare to the tasks identified by the Air Force and how they compare to the Marine Corps and the Army will be discussed later.

Table 2 in Appendix A lists the types of aircraft possessed by naval aviation today and shows which aircraft type supports each of the warfare tasks just addressed.11 Like Table 1, Table 2 will be used later for comparison with the other services.

The mission of Marine Corps aviation is "...to participate as the supporting air component of the Fleet Marine Force (FMF) in the seizure and defense of advanced naval bases and for the conduct of such land operations as may be essential to the prosecution of a naval campaign. A collateral mission of Marine Corps aviation is to participate as an integral com-

ponent of naval aviation in the execution of such other Navy functions as the fleet commanders may direct."12 Doctrinally, then, Marine aviation must not only be prepared to accomplish its own aviation tasks in support of the FMF, but must also be prepared to perform the tasks of naval aviation identified above. What are the tasks of Marine aviation? The tasks have been categorized in six functional areas : Air Reconnaissance, Antiair Warfare (same as the Navy), Assault Support (which includes Vertical Assault Airlift, Air Delivery, Inflight Refuelling, and Air Evacuation), Offensive Air Support (which includes Close Air Support and Deep Air Support), Reconnaissance, Electronic Warfare, and Control of Aircraft and Missiles (C3).13 These six functions of Marine Aviation will be compared to the eleven functional and supporting warfare tasks of the Navy, and the nine "interdependent missions" and six "specialized tasks" of the Air Force in Part III of this monograph.

Table 3 of Appendix A lists the aircraft currently possessed by the Marine Corps, and shows which function of Marine aviation each supports.14 Comparisons with Tables 1 and 2 will be discussed in Part III.

Army doctrine states that the mission of Army aviation is "... to find, to fix, and to destroy the enemy through fire and maneuver, and to provide combat support and combat service support in coordinated operations as an integral member of the combined arms team."15 The tasks to be performed by

Army aviation in support of this mission are reflected under three aviation roles -- maneuver, combat support, and combat service support. The tasks are :

Maneuver - (Attack, Reconnaissance and Security, Air Assault, Air Combat, Special Operations, and Command and Control)

Combat Support - (Intelligence and Electronic Warfare, C3I Enhancement, Air Traffic Control, Fire Support, and Search and Rescue)

Combat Service Support - (Aeromedical Evacuation, Aviation Maintenance, Logistics, and Air Movement).16

These fourteen tasks under the three roles of Army aviation will be compared to the aviation tasks of the other services in Part III.

Table 4 of Appendix A lists the fourteen tasks of Army aviation, and shows which aircraft currently possessed by the Army supports each task.17 Table 4 will be compared later to Tables 1, 2, and 3.

At this point the reader may well be asking what all this has to do with the Air Component Commander. Is this relevant? The answer is that yes, the missions and tasks for aviation as seen by each of the services are extremely relevant. The assets each service has acquired to support those missions and to perform those specific tasks are also critically relevant to the discussion of the Air Component Commander, as a comparison of service doctrines shows.

III. DOCTRINAL AND STRUCTURAL DIFFERENCES

Differences in doctrine between the four services are not uncommon. The extent of the differences, however, can have a dramatic impact in how each service feels it should be employed in a joint environment. By closely examining the aviation doctrine of each service, we should be able to deduce the ease or degree of difficulty with which aviation assets from different services can be expected to operate together jointly.

First, the basic mission of aviation in each Service will be examined. Notice that in three of the four Services (Navy, Marine Corps, and Army) the mission statement for aviation clearly establishes the relationship of aviation to the rest of the Service's forces :

Navy - "...it is essential that naval battle forces and groups include organic tactical air power" to "counter enemy manned aircraft in the area of naval operations";18

Marine Corps - "... to participate as the supporting air component of the FMF";19

Army - "... in coordinated operations as an integral member of the combined arms team".20

Only the Air Force mission statement fails to state the mission <u>in relationship to other non-aviation forces</u>.21

How significant is this difference? It may well be the most crucial difference to be identified. The Navy, the Marine

Corps, and the Army view their aviation as a natural force component to use in accomplishing their mission. The Air Force, on the other hand, has no inherent relationship to any non-aviation component even implied in its doctrinal mission statement. This may explain in part why the services view their aviation as they do and as importantly, why their aviators view their employment as they do. Navy, Marine Corps, and Army aviators tend to see themselves as an integral part of their service force which supports the rest of the force, while Air Force aviators tend to see themselves alone (with other aviators, possibly) fighting a separate air war. It may seem strange to a non-aviator that two pilots from different services can so dramatically disagree on how their common airplane should be employed, until he realizes that each aviator has been "indoctrinated" with his service's views on doctrinal missions and employment.

The second significant point concerning the difference in each of the service's basic aviation mission statements (and hence their perceptions on aviation's uses) relates to what types of resources are acquired to make up the service's aviation structure. If your mission is to support naval forces outside the range of land-based air, you need an aircraft that can operate from a ship. If you are to be an integral part of a combined arms team, your decisions on systems to meet that requirement will probably be different than if you are only to operate in the aerospace environment

with no specified relationship to another force operating in another medium. The reality of this can be seen in Appendix A, where each service has acquired different assets to perform similar, if not identical, tasks.

Now let's compare how each service envisions its aviation accomplishing its stated mission, in other words, how each service sees aviation peforming. It is interesting that no two services use even the same basic terminology to talk about how aviation will accomplish its mission. The Air Force discusses "interdependent missions" and "specialized tasks".22 The Navy talks about "fundamental warfare functions and supporting warfare functions".23 The Marine Corps talks about "the functions of aviation".24 The Army discusses "the roles and tasks of aviation".25 Tasks to one service mean functions to another, and so on. This absence of a common terminolgy can make inter-service doctrinal discussions difficult to say the least. But working on the assumption that a rose by any other name is still a rose, let's see how much each service has in common in the area of functions and tasks.

Taking into account the various subsets of functions and tasks for aviation identified in each service's doctrine, the services view the number of tasks as follows : Air Force - 18, Navy - 14, Marine Corps - 12, and Army - 14. Surprisingly, there seems to be rough parity in the number of tasks for aviation envisioned. But are they the same tasks? The

Air Force, Navy, and Marine Corps all concur that negating the enemy's air through both offensive and defensive action are two of the tasks required of aviation (counter air and antiair warfare). The Army does not have this on its task list since its aviation is not expected to perform it except in the Army's task concept of air combat. All four services have reconnaissance, electronic warfare, and command and control as three of their tasks and have roughly the same visions of these tasks. All four services task aviation to provide close support to ground troops (Air Force, Navy, Marine Corps -- close air support, Army -- fire support). All four services have comparable, though by no means identical, tasks to attack enemy forces not in contact with friendly troops (Air Force -- air interdiction, Navy -- strike warfare, Marine Corps -- deep air support, Army -- deep operations). All four services have aviation tasked to move assets (Air Force -- airlift, Navy -- logistics, Marine Corps -- vertical assault airlift and air delivery, Army -- air movement/air assault). Three of the services (Air Force, Navy, and the Marine Corps) have a task to provide fuel to airborne aircraft (aerial refuelling, logistics, and inflight refuelling, respectively). Two of the services (Marine Corps and Army) task aviation to move wounded (air evacuation and aeromedical evacuation). The Air Force has additional tasks not already addressed, including strategic tasks (strategic offensive and defensive opera-

tions) which the other services do not have. The Air Force also has the task of aerospace maritime operations which can be supportive of a number of Navy tasks for aviation not addressed (antisubmarine and antisurface warfare, mine warfare, etc.). The Army has several aviation tasks not covered by the other services, including search and rescue and C3I enhancement.

By comparing the outlined "tasks" identified in the services' doctrines, it becomes obvious that the services have no common picture of the tasks aviation must perform. The tasks are very close in many areas, if not identical in the areas addressed. The dissimilar tasks are so dissimilar and of such a high priority to each service that the areas of commonality become lost in the ensuing disputes. A service that has acquired an asset for its structure to fulfill a specific task (or in the case of dual or multi-purpose systems more than one task) wants and expects to see it employed for that task, not for some other task for which it is either not designed, or was not really acquired to perform.

The tables in Appendix A abound with examples of just this situation. The F-14 Tomcat was acquired by the Navy with specific design parameters to operate from a carrier to perform antiar warfare (counter air) tasks.26 It cannot be replaced by an Air Force F-15 Eagle which was designed to perform the same task because the F-15 was not designed to operate from a carrier in support of naval forces. The AV-8

Harrier was acquired by the Marine Corps to perform the tasks of both close and deep air support.27 Deep air support is a comparable task to Air Force air interdiction, but normally not to the same ranges (the AV-8 is unsuitable for depths the Air Force considers normal, since it does not possess the same range capability as most Air Force air interdiction aircraft). It would be a misuse of an asset to use the F-14 for overland counter air operations, just as it would be to try to use an F-15 for antiair warfare from a carrier or an AV-8 for an air interdiction mission. Each asset was designed to perform a specific task (or tasks) for the specific service which acquired it, and while there may be some degree of flexibility in how each asset is employed, today that is more often not the case. The sophistication of technology is increasingly limiting the flexibility with which today's, let alone tomorrow's, systems may be used to accomplish tasks for which they were not designed. Previous wars (World War I, World War II, and even Korea) saw simpler aircraft capable of "swinging" from one task to another with reasonable ease. Those days are by and large gone. Specialized aircraft for specialized tasks are becoming more and more common, and this trend if anything will probably accelerate in the future.

What has this look at doctrinal and structural differences revealed to us? The doctrinal mission statements for aviation within the four services do not provide a common vision for how aviation will be used. Three service mission

statements state a support relationship for aviation with other force components (ground or naval). The Air Force mission statement does not. It sets the tone for further doctrinal development by the Air Force of the indivisibility of air in its relationship with other force components, while this same view is not held by the other services who see aviation as an integral capability of their force.

Each service envisions a number of tasks or functions it expects aviation to perform. Many of the tasks envisioned by one service are also more or less envisioned by one or more of the other services, although rarely is a common name used for the same task. Each service also has some unique task which it alone sees its aviation performing. A lack of common terminology relating to aviation and the different tasks and functions envisioned by the services can only compound the problem of employing the aviation assets of two or more services together in a joint environment. Adding to this potential for misunderstanding are: the different missions for aviation, the different terminologies relating to aviation, and the specialization of aviation structure within the services. The possibility of smoothly merging aviation from the various services into a single cohesive fighting force seems remote indeed. This should set the stage for discussing the issue of the Air Component Commander in detail.

IV. ACC/JFACC DISCUSSION

To set the reader's mind at ease, I do strongly believe that the aviation from the four services can operate together, and operate well, in a joint environment. The effort in the preceding section set the stage for a discussion and comparison of two visions of who should be responsible for bringing these doctrinal and structural differences together in joint operations. The two visions I am referring to are the Air Force vision of the Air Component Commander, and the JCS recognized concept of the Joint Force Air Component Commander. As I will show, these two concepts are not the same.

The Air Force definition of the responsibility of the Air Component Commander in a joint force states : "... In the operational chain of command, to support and employ all aerospace forces under his operational authority as directed by the joint force commander. The air component commander is responsible for recommendations to the joint force commander on apportionment of aerospace forces and the targeting, allocation, and tasking of aerospace resources to accomplish assigned objectives."28 Additionally, Air Force doctrine states, "Joint force commanders normally direct the employment of aerospace forces through the air component command; ... The air component command is employed as an interdependent force with the land and naval components."29 The key parts of the Air Force vision of the Air Component Commander are that he is a <u>functional</u> vice <u>service</u> commander

(that is, he is responsible for commanding the function of aviation, not in specifically comanding one of the service components of the joint force) responsible to support and employ all aerospace resources under his operational control, and is responsible to recommend apportionment and perform targeting, allocation, and tasking of aerospace resources to accomplish objectives. Let's compare that vision with the JCS concept of the Joint Force Air Component Commander (JFACC).

The JCS definition of the Joint Force Air Component Commander is : " The joint force air component commander derives his authority from the joint force commander who has the authority to exercise operational control, assign missions, direct coordination among his subordinate commanders, redirect and reorganize his forces to ensure unity of effort in the accomplishment of his overall mission. The joint force commander will normally designate a joint force air component commander. The joint force air component commander's responsibilities will be assigned by the joint force commander (normally these would include, but not be limited to, planning, coordination, allocation and tasking based on the joint force commanders apportionment decision). Using the joint force commander's guidance and authority, and in coordination with other service component commanders and other assigned or supporting commanders, the JFACC will recommend to the joint force commander apportionment of air

sorties to various missions or geographic areas."30 How does this differ from the Air Force's ideas?

The JFACC has functional vice service responsibilities, (just like the ACC) but does not inherently have operational control of all aviation assets (notice the definition says operational control is "exercised" by the JFC, and says nothing about operational control for the JFACC). The JFACC's responsibilities are assigned by the JFC (none inherent) and will normally include planning, coordination, allocation, and tasking based on the JFC's apportionment decision. The JFACC will make apportionment recommendations to the JFC based on the JFC's guidance and authority, and in coordination with other service components, assigned, or supported commanders.

What are the differences in these two concepts? Both recognize that one individual will have functional vice service responsibilities. The Air Force Air Component Commander (ACC) will "support and employ all aviation assets under his operational control", implying immediately that the ACC will have operational control of aviation assets (functional control), and will support and employ them. No such assumption is implied in the JCS JFACC definition. Operational control under joint rules is exercised by the JFC, not the JFACC, and no mention is made of the JFACC supporting and employing aviation assets.

This point is central to the discussion. While both con-

cepts identify an individual with functional responsibilities to the JFC, the Air Force's ACC is also assumed to be a commander supporting and employing assigned forces while the JFACC definition makes no such assumption. An individual can perform the responsibities identified for the JFACC (planning, coordination, allocation, and tasking) without possessing or having operational control over a single aircraft. The USAF concept is based on the individual possessing operational control of aviation assets being responsible to the JFC to perform the planning, coordination, allocation, and tasking functions, while the JFACC concept contains no implication that the individual performing these functions must also have operational control of aviation assets. Could he have it? Certainly. But the point is the Air Force ACC must have it while the JCS JFACC concept has no such requirement.

A second difference appears in the examination of the apportionment recommendation to be made to the JFC in both concepts. In Air Force doctrine the ACC will make "recommendations to the joint force commander on apportionment of aerospace forces and the targeting, allocation, and tasking of aerospace resources". The JCS JFACC will make apportionment recommendations to the joint force commander on sorties to be assigned to given missions or geographic areas " using the joint force commander's guidance and authority, and in coordination with other service component commanders and other assigned or supported commanders". The ACC has not

only the responsibility to make an apportionment recommendation to the JFC, but has the responsibilty (at least implied) to do so unilaterally. The JFACC must clearly coordinate his recommendation on apportionment with all of the other commanders in the joint force. The ACC recommends the apportionment of aerospace forces, while the JFACC recommends sorties to missions and geographic areas. Additionally, the ACC performs targeting, allocation and tasking of aerospace resources to accomplish assigned missions as an inherent responsibility, while the JFACC has no such inherent responsibility unless it is assigned to the JFACC by the JFC.

Are these two concepts similar? Obviously, they are. The Air Force has maintained in a number of position papers that the two concepts are synonymous.12 It is my opinion based on research that they are not synonymous, and, to the contrary, reflect a significant divergence of opinion on the responsibilities inherent to the individual who will be the joint force commander's aviation expert. The Air Force's concept of the single manager of all aviation assets can be traced to its historical origins in the North African campaign in World War II where it was developed and refined.31 That concept can be seen clearly reflected in their doctrinal definition of the Air Component Commander, an aviation commander having operational control to support and employ aerospace forces, with the unilateral responsibility to the joint force commander to recommend apportionment of aviation

assets and to target, allocate, and task those resources. The JFACC as defined by JCS is clearly not this same single manager of all aviation assets.

The Joint Force Air Component Commander (JFACC) concept as defined by JCS says almost as much by exclusions from the definition as it says by its inclusions. It does not say that the JFACC is the single manager of all aviation assets. It does not say that the JFACC has operational control of aviation assets. It does not imply that the JFACC can unilaterally recommend apportionment of aerospace resources, but it does say that the JFACC must coordinate his recommendation on sortie apportionment with the other commanders in the joint force. It does not say that the JFACC is responsible for targeting, although he will normally be responsible for allocation and tasking functions. The deliberate exclusion of these key components in the Air Force's ACC definition from the JCS JFACC definition should make it clear that the JCS did not envision the JFACC in exactly the same way the Air Force envisions the ACC.

Why the difference? The Air Force was certainly represented as the JFACC definition was evolving and being approved by JCS. Why isn't it identical to the ACC? The answer can probably be found in the fundamental vision each service has on the mission of aviation. The Air Force has historically had a vision of aviation at the theater level of war where aviation has been centralized at the highest

level to produce the maximum operational effect to accomplish strategic objectives. The assumption by the Air Force of the strategic nuclear delivery and defense role (Strategic Offensive and Defensive Operations, remember?) after World War II only tended to reinforce and solidify this vision of aviation as an operational or strategic force almost standing alone from the other services.32 The Air Force strongly supports the subordination of aerospace forces to the higher commander's authority, but just as strongly supports a single aviation commander controlling all aviation assets for the higher commander. The other services have evolved a different vision of aviation.

The Navy and the Marine Corps have historically envisioned aviation as a tactical capability which enhances and augments the rest of the service's forces. As the Navy developed aviation and aircraft carriers, it was not seen as a capability which would replace other capabilities (battleships, submarines, etc.), but rather as an additional capability that would tactically enhance the existing naval forces. As the war in the Pacific in World War II was to prove, the tactical capability of carrier aviation could have decisive operational effects (a prime example was the battle of Midway effectively ending the dominance of the Japanese Navy in the Pacific).33 But naval aviation was always seen in the context of other naval forces, not as a theater force to be employed for decisive effect alone. In the Navy doc-

trine of today, aviation is still viewed in the context of naval warfare tasks, not as assets which can have decisive operational impact alone.

The evolution of Marine aviation followed a similar development to that of naval aviation. As aviation was first acquired by the Marines, it was used as a reconnaissance and resupply enhancement over existing capabilities. As aviation developed, it was seen as a significant tactical enhancement to Marine ground forces in close air support and air defense roles. Marine aviation has always been seen as a tactical, not operational, resource in support of the Marine force which can have an operational impact. In contrast to the Navy, the Marine Corps did let aviation replace some of the capabilities it had prior to the advent of aviation by reducing its firepower assets in artillery and armor in favor of more aviation. Marines normally assert that the loss of Marine aviation by a Marine force exposes that force to a significant firepower shortfall because of the organizational decision to replace ground tactical systems with aviation tactical systems.

The Army's vision of aviation has been shaped from the traumatic period of the transition of the Army Air Corps into the Air Force. For some years after the separation, the Army had little (if any) aviation of any kind. With the development of the helicopter, the Army reentered the

aviation arena, but always with a wary eye on the roles and missions issue between Army aviation and the Air Force. Army aviation doctrine today is almost totally a reflection of Army ground force terminology (Maneuver, Fire Support, Attack, etc.) instead of including some of the more common aviation terminology already developed (close air support, deep air support, interdiction, etc.). To preclude conflict with the Air Force, the Army has maintained its aviation as a tactical asset which is an integral part of the combined arms team.

So the Air Force has historically viewed, and presumably still views, aviation as a theater asset having operational impact, while the other three services view aviation as a tactical asset which is an integral force component. All of the other services hold that it is the force which has operational impact in the theater, not a single part of the force. This is where, in my opinion, the differences between ACC and JFACC are founded.

The Air Force envisions a theater air commander who will wield the aviation weapon for the theater commander for maximum operational effect. The other services see the need for coordination of the air effort within the theater, but see their forces with aviation support as being what will have decisive effect for the theater commander. From these two visions come the ACC -- the single manager of all theater aviation assets -- and the JFACC -- the theater air coordinator

who will ensure theater objectives are met <u>through the coordination</u> of the aviation efforts of each of the services. Which is the better, or more viable, concept? Before drawing conclusions, there is some utility in looking at how our adversary, the Soviet, envisions his aviation and how he looks at this question of aviation command and control.

V. A SOVIET PERSPECTIVF

The Soviet views his aviation and its employment very differently from how we view ours. An excellent article in the Air University Review34 discusses how the Soviet envisions employing air, and gives a good basis for developing how he views the command and coordination of the air effort.

No mistake should be made in trying to tie this discussion on Soviet aviation directly to the inter-service issues already discussed in this monograph. The Soviet does not organize his forces into an Army, Air Force, and Navy as the same separate and unique entities as we do. The Soviet military is from top to bottom organized to support Soviet ground force operations. Organizations, structure, and command relationships all have this single premise as their start point.35 As was seen in the early discussions of U.S doctrine, no such unifying premise exists for us. Keep this in mind as we look at aviation through the Soviet's eyes.

Soviet forces are organized to fight at each of the three levels of war -- the strategic level, the operational level, and the tactical level. Aviation assets are allocated as an integral part of the organizational structure at each level.36 At the tactical level (division and below), a helicopter squadron is allocated to the division to provide direct aviation support in lift, electronic warfare, reconnaissance, and fire support to the tactical commander.37 At the operational level (army and front), each army has its own air

assault battalion, a general purpose helicopter squadron, and an attack helicopter regiment.38 This gives the army commander the ability to weight his main effort with his integral aviation without needing to achieve outside coordination or approval. At each front, the front commander has an integral air army consisting of usually three fixed wing regiments and around two helicopter regiments. With these assets, the front commander can fight against his opponent's aviation, or further augment the aviation support of his ground armies, without conducting additional coordination or obtaining higher approval. The theater (TVD) commander will normally have one or more air armies assigned to him as his operational-strategic aviation. He may be tasked by STAVKA to use his aviation to accomplish a strategic objective, but is more normally allowed to employ his air armies of both fixed and rotary wing aircraft to achieve his operational or strategic objectives or to further augment the air capabilities of one of his subordinate fronts. And finally, STAVKA retains air armies in the Strategic Air Forces (PVO STRANY) to meet STAVKA strategic objectives, to defend the homeland, and to augment the efforts of TVD commanders as required.39

This organizational structure of Soviet aviation directly reflects the Soviet's attitude that the employment of aviation is critical to the success of the tactical battle, the operational battle, and the strategic war. The commander at

each echelon has operational command of his own aviation assets, and can reasonably expect additional aviation support from his boss. Aviation assets are dedicated to fight specifically the tactical battle, and are developed and acquired to do specifically that. Aviation assets are dedicated to fight the operational battle (counter the operational opponent and augment the tactical battle) and are designed and acquired to perform specifically those functions. And finally, strategic aviation assets are needed to counter the opponent at that level and to augment forces at the operational level if required.

What about the Soviet's Air Component Commander? Each of the aviation organizations at the division, army, front, TVD, and strategic levels has a commander who serves as the primary aviation staff officer for the senior commander at that echelon. He plans, coordinates, allocates, tasks, and controls his aviation assets for his commander. He does not, however command the aviation assets at the units subordinate to his commander, just as he is not commanded by aviation commanders in units senior to his. If a TVD commander wants the aviation of one of his front commanders to perform a mission, he tells the front commander, who then directs his aviation commander to execute the mission. There is no inherent hierarchy within the aviation structure from top to bottom in Soviet forces. Aviation works for the organizational commander at each echelon, not for some

separate aviation hierarchy.40

However our concept on how to coordinate and control our aviation evolves, it must counter the potential of Soviet aviation organized to fight a tactical air battle, a separate but overarching operational air battle, and a separate but overarching strategic air battle. If our aviation fights only at the tactical level, his operational and strategic air forces will defeat us. Yet if we fight only at the operational and strategic level, even if successful, and fail to fight at the tactical level, the Soviet tank driver eating his lunch in our airfield snack bar may question our decision.

VI. CONCLUSIONS

I will finally attempt to answer the question "Is the concept of the Air Component Commander viable?" Is it reasonable to expect an individual from a single service to understand the doctrine and structural capabilities not only of his service, but also of three other services?

In my opinion, the Air Force concept of the Air Component Commander -- the single manager of all aviation assets in the joint force -- is bankrupt. My reasons are based on the background already established, and are four-fold in nature: first, the absence of a single concept or vision for the employment of aviation; second, the absence of a single doctrine for the employment of aviation; third, the divergence in structure (aviation capability) that each service has developed, organized, and trained to in the absence of a unifying joint aviation concept and doctrine; and fourth, the failure of the concept to address the capability in aviation of our most threatening opponent, the Soviet. Each of these reasons for believing the Air Component Commander concept is not viable will be explained.

First, the lack of a single clear concept or vision on how aviation should be employed in a joint force makes the ACC - single manager concept impractical. Each service component of the joint force has its own concept of how aviation should be employed. The Air Force looks at theater level air operations, the Navy looks at aviation support of

the naval campaign, the Marine Corps looks at tactical support of the MAGTF, and the Army looks at aviation in the concept of AirLand Battle and the combined arms team. Whose concept is right or wrong is beside the point. Any service representative trying to be the single manager of all aviation assets would have to bring his ingrained vision to the job to the greater or lesser detriment of the concepts of the other services. Will this assist with unity of effort? And let's look at the true extremes that could potentially arise. How much would the Army commander like it if the ACC (from one of the three other services) tasked his CH-47 and UH-60 assets to support another service in the middle of a major offensive effort on his part? Or how about tasking his AH-64s, which can do deep attack, to attack three enemy fixed wing airfields in support of the Offensive Counter Air operations? Or what about an ACC who tasks F-111s to conduct Close Air Support? Or an ACC who wants EA-6s to escort an Air Interdiction mission into and out of the target area? These are extremes, granted. One would hope that no reasonable, experienced professional would do any of these except in the greatest crisis, and then only after some coordination. But, the ACC - single manager concept does not preclude the possibility of such errors, especially with four different ideas of how to employ aviation in the services and with the possibility that any service representative could be designated the ACC.

My second reason for believing the Air Comopnent Commander concept is not viable is based on the absence of any joint doctrine identifying the tasks that joint force aviation must perform. This point is closely tied to my first concern about a lack of a common vision on aviation employment. If you attempted to synthesize the various tasks identified in the separate service doctrines into a master task list for joint force aviation (combining those that are similar under a common header), it might look something like this:

Strategic Offensive Operations
Strategic Defensive Operations
Counter Air (Offensive and Defensive)
Air Interdiction
Close Air Support
Special Operations
Airlift (Strategic, Theater, and Tactical)
Reconnaissance
Antisubmarine Warfare
Antisurface Craft Warfare
Offensive Mine Operations
Surveillance
C3
Electronic Warfare
Assault Support
Aerial Refuelling
C3I Enhancement
Aeromedical Evacuation
Search and Rescue
Aviation Maintenance and Logistics.

These twenty tasks reflect most, if not all of the tasks, identified by the services. The heart of the question is whether any single service representative is really professionally trained and competent in <u>all, or even most</u>, of these tasks. Again, there is no doctrinal basis to believe so, and from my research and experience there exists no educational institution which even addresses all of these

tasks. In the absence of a joint aviation doctrine, and in the absence of any institution where an individual can learn all of the aviation capabilities of each of the services, I fail to see how any single service representative could effectively support and employ, let alone operationally control, all of the aviation resources of the joint force. I also fail to understand why anyone would want to, if a more viable alternative exists.

My third reason for feeling the ACC concept is bankrupt is based on the divergent aviation structure each service has developed in the absence of a unifying single concept on aviation employment. The structures identified in Appendix A show that the majority of assets acquired by the services to meet aviation tasks are capable of performing more than one task (the D designator). Is it reasonable to expect any individual -- any single manager of all aviation resources -- to understand the full capabilities of every airframe -- both fixed wing and rotary wing -- of all four services? Again, I will reiterate that the "accepted convention" of considering only fixed wing aviation in the context of the ACC is itself bankrupt. Rotary wing assets like the AH-64 in its deep strike potential, the CH-47 and CH-53 in theater airlift potential, and the improved technology evolving in the MV-22 and LHX make the days of separating fixed wing capabilities from rotary wing impractical, if not ludicrous. Yet to have a single manager -- who has little or no experience with the

vast majority of the resources in the joint force -- responsible for the support and employment of all aerospace resources is simply asking to much of anyone. There is no data base, or instruction, or school which even comes close to addressing the complete aviation capabilities of all of the rotary wing and fixed wing assets of the four Services. Yet, the Air Force feels an Air Component Commander can effectively employ them all in a joint operation!

The three reasons I have already discussed may seem to the reader to reflect some deep-seated bias against the Air Force in general. That is <u>not</u> the case. The concerns I am attempting to reflect are those of an individual involved in aviation employment who cannot understand how the single manager (ACC) concept can work in the current chaotic environment that exists where there is no common concept on aviation employment, no common doctrine, and such a wide range of tailored aviation capabilities that it seems to simply be impractical (not viable) for any representative from a single service to be capable of performing the function as envisioned by the Air Force. My fourth, and final, reason for believing it is not viable is based on my belief that the ACC concept fails to provide an effective structure to counter the Soviet aviation threat.

It must be remembered from the earlier discussion of Soviet aviation that it is structured to support the force commander at the tactical, operational, and strat-

egic levels. To counter Soviet aviation at any one level without countering the aviation at the other levels is a recipe for defeat. Our aviation force will be fighting against aviation commanders at each of these three levels, and must be able to counter each while providing necessary aviation support to the joint ground and naval forces. The fact is that aviation must counter multiple tactical level aviation commanders (divisions/armies), multiple operational aviation commanders (armies/fronts), and an aviation commander with an operational-strategic focus who may be supported by additional strategic assets (TVD). And this must be done while support is being provided to the joint ground and naval forces. The concept of the indivisibility of air and the single manager concept seems to be a poor counter against an adversary who <u>divides</u> his air into structures supporting operational commanders at each level of operations under <u>multiple</u> aviation commanders. To expect a single manager, the ACC, to be able to focus his intelligence and targeting assets <u>at each level and against each commander</u> simultaneously while supporting the other components of joint force, and then pulling together all of the diverse resources of aviation in the joint force to effectively counter his opponents seems to be about like one gunfighter confronting six gunfighters alone. Structurally, the single manager -- ACC -- concept is mismatched when attempting to counter the Soviet.

If the Air Component Commander concept of the Air Force

is not viable, is there a concept for coordinating and controlling aviation in the joint force that is viable? The answer is a qualified "yes". The Joint Force Air Component Commander (JFACC) concept of the JCS can meet the requirement. Remember the differences in the ACC and the JFACC. The JFACC, designated by the Joint Force Commander, is responsible for planning, coordinating, allocating, and tasking sorties for the joint force. Operational control, not addressed in the definition, could be retained by each service component of the joint force, who understands its aviation capability, and can best employ it. With an aviation expert from each service component located with the JFACC and JFC, the aviation component of each service component can be integrated into an overarching joint air plan to support the joint force. Each service, whose leaders understand the doctrinal basis and structural capability of their own aviation, would execute the plan in a decentralized mode to accomplish joint force objectives. The recommendations for apportionment made to the JFC by the JFACC, coordinated with each service component, will ensure that each service's capability is optimized in support of the joint force. In the absence of a common aviation vision and common doctrine, this technique allows the unique vision of aviation by each service component to be utilized, but focused via the JFACC to meet joint force objectives. It also obviates the problem of a single individual needing to understand the aviation

capabilities of each service by having the JFACC giving mission orders and sortie tasking to each service component, and letting the service components who knows their own capabilities make the maximum use of each resource.

Can the JFACC concept provide an effective counter to Soviet aviation? I believe it can. By optimizing the unique aviation doctrine and structure of each service and by leaving operational control of their aviation with each service component, an infrastructure similar to the Soviet's would be in place. The JFACC would be responsible for the overall planning and coordination of the joint force air effort, but would primarily focus on the TVD commander, and on countering his air capabilities. The resources the JFACC would use for this would be allocated and tasked from the Air Force, Navy, and Marine Corps fixed wing assets. The JFACC could delegate the responsibilty to counter the front commander's aviation to his Air Force component commander, who has the right type of resources, structure, and doctrine to fight and win a theater-type air battle. The Air Force component commander, if he needed additional assets for his fight against the front, could request additional sorties through the JFACC from the Navy and Marine Corps components. The JFACC could delegate the responsibility to counter the multiple army commanders' aviation to his Marine Corps component commander, who has the C3 system, intelligence system, doctrine, and structure to accomplish just such a mission.

And finally, the JFACC could delegate the responsibility to counter front-line division aviation to his Army component commander, who has the right kind of intelligence collection systems, ground air defense systems, and deep attack capability to counter this threat, which is of most immediate concern to the Army component commander anyway.

This scheme using the JFACC concept and service components retaining operational control of their own aviation takes the previously identified weakness of different service doctrines and structures and attempts to use them in the optimum fashion. By focusing a commander and his aviation force from within the joint force on a specific echelon of the Soviet's aviation capabilty, a counter to Soviet aviation can be organized from existing assets. Each commander can focus his efforts, his intelligence systems, and his force on a specific part of the Soviet's complex structure, breaking it down into bite-size chunks. Though there are certainly other ways this might be done, this example at least demonstrates that there <u>are</u> ways to counter Soviet aviation, and there are ways to take the different doctrines and structures of the services' aviation elements and effectively employ them in a joint force.

In conclusion, it does not seem that the Air Force Air Component Commander concept is viable in an era when each of the four services has developed a unique aviation doctrine and structure. The single manager of all air resources, and the "indivisibility of air" concept of the

Air Force, do not appear particularly viable against a Soviet opponent with a radically different view of aviation and its employment. The Joint Force Air Component Commander, as defined by the JCS, is not the same as the Air Force Air Component Commander concept, and appears to be a much more viable concept for the coordination and control of aviation in a joint force. And finally, there is a critical shortfall in a common joint vision on what aviation is to do, and a joint aviation doctrine which would support that vision. This joint vision and doctrine for aviation must be developed.

APPENDIX A

AVIATION STRUCTURE COMPARED TO MISSIONS, ROLES, AND TASKS

TABLE 1

AIR FORCE STRUCTURE COMPARED TO MISSIONS AND TASKS

	MISSIONS AND TASKS															
	MISSIONS									TASKS						
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7
STRUCTURE																
AIRCRAFT (Endnote 7)																
A-10					Y											
AC-130						Y										
B-1	Y															
B-2	Y															
B-52	D			D					D							
C-130							Y									
C-141							Y									
C-5							Y									
EA-3			D					D	D			D				
EC-130						D		D			D					
EC-135											D	D	D			
EF-111											Y					
F-4E			D	D	D											
F-4G			Y													
F-15			D													
F-16			D	D	D											
FB-111	D		D	D					D							
KC-10										Y						
KC-135										Y						
MC-130						Y										
MH-53						Y										
RF-4								Y								
C3 System	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Weather System																Y
Intelligence System													Y			

LEGEND : Y = performs mission/task D = dual mission capable

Missions - (Endnote 6)

1 Strategic Aerospace Offense
2 Strategic Aerospace Defense
3 Counter Air
4 Air Interdiction
5 Close Air Support
6 Special Operations
7 Airlift
8 Aerospace Surveillance and Reconnaissance
9 Aerospace Maritime Operations

Tasks - (Endnote 6)

1 Aerial Refuelling
2 Electronic Warfare
3 Warning, Command, Control, and Communications
4 Intelligence
5 Aerospace Rescue and Recovery
6 Psychological Operations
7 Weather Service

TABLE 2

NAVY STRUCTURE COMPARED TO WARFARE TASKS

	WARFARE TASKS													
	1A	1B	2A	2B	3A	3B	4	5	6	7	8	9	10	11
STRUCTURE														
AIRCRAFT (Endnote 11)														
A-6	D				D	D	D	D	D		D			
A-7	D				D	D	D	D	D					
C-9														Y
C-12														Y
E-2C										D		D	D	
EA-6													Y	
EP-3											D	D	D	
F-14	D	D												
FA-18	D	D			D	D	D	D						
MH-53E									Y					
P-3			D	D					D	D				
S-3				Y										
SH-60				Y										
C3 System	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Intelligence System											Y			

LEGEND Y = performs task D = dual mission capable

Warfare tasks/Supporting tasks (Endnote 10)
1A Antiair Warfare - Air Superiority
1B Antiair Warfare - Air Defense
2A Antisubmarine Warfare - Distant Operations
2B Antisubmarine Warfare - Close Operations
3A Antisurface Warfare - Distant Operations
3B Antisurface Warfare - Close Operations
4 Strike Warfare
5 Amphibious Operations - Close Air Support only
6 Mine Warfare - Offensive
7 Ocean Surveillance
8 Intelligence
9 Command, Control, and Communications
10 Electronic Warfare
11 Logistics

TABLE 3

MARINE CORPS STRUCTURE COMPARED TO FUNCTIONS

	FUNCTIONS									
	1A	1B	2A	2B	2C	3A	3B	4	5	6
STRUCTURE										
AIRCRAFT (Endnote 14)										
A-4	D	D				D	D			
A-6						D	D			
AH-1							D			
AV-8	D	D				D	D			
CH-46			Y		Y					
CH-53			Y		Y					
EA-6									Y	
FA-18	D	D				D	D			
KC-130				Y						
OV-10								D		D
UH-1			D		D					D
RF-4								Y		
C3 System	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Intelligence System										
Weather System										
Surface-to-air Missiles		Y								Y

LEGEND Y = performs function D = dual mission capable

Functions (Endnote 13)
1A Antiair Warfare - Offensive
1B Antiair Warfare - Defensive
2A Assault Support - Vertical Assault Airlift
2B Assault Support - Inflight Refuelling
2C Assault Support - Air Evacuation
3A Offensive Air Support - Close Air Support
3B Offensive Air Support - Deep Air Support
4 Reconnaissance
5 Electronic Warfare
6 Control of Aircraft and Missiles

TABLE 4

ARMY STRUCTURE COMPARED TO ROLES AND TASKS

ROLES AND TASKS

STRUCTURE	1	2	3	4	5	6	7	8	9	10	11	12	13	14
AIRCRAFT (Endnote 17)														
AH-1	D								D					
AH-64	D								D					
C-12							Y							
CH-47												D	D	D
Hughes 500					Y									
MH-60					Y									
OH-58		D				D								
UH-1						D		D						
UH-60			D					D		D		D		D
C3 System	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

LEGEND Y = performs task D = dual mission capable

Roles and Tasks (Endnote 16)
Manuever
1 Attack
2 Reconnaissance and Security
3 Air Assault
4 Air Combat
5 Special Operations
6 Command and Control
Combat Support
7 Intelligence and Electronic Warfare
8 C3I Enhancement
9 Fire Support
10 Search and Rescue
11 Air Traffic Control
Combat Service Support
12 Aeromedical Evacuation
13 Aviation Maintenance and Logistics
14 Air Movement

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